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(71) Applicant: **KOJUNDO CHEM LAB CO LTD**(72) Inventor: **CHIBA TSUTOMU**

(74) Representative:

**(54) INTEGRATED
STRUCTURE TYPE
SPUTTERING TARGET**

(57) Abstract:

PROBLEM TO BE SOLVED: To prevent failures such as the warpage of a target, water leakage in a loading part and abnormal discharge by joining the outer circumference of the bottom part of a disk-shaped soft Al metallic target and the inner circumference of the annular collar part in a hard Al alloy by a

friction welding method.

SOLUTION: A target 1 is formed of a disk-shaped soft Al metal of about 20 to 40 Brinell hardness such as Al, Al-Ti and Al-Cr. An annular collar part 2 to be loaded on the target loading part in a sputtering device is formed of a hard Al alloy of about 70 to 100 Brinell hardness in JIS 5052, and plural bolt holes 3 are provided. Either the target 1 or the collar part 2 is held at the pawl part of a rotary body and is rotated at a high speed, the other is fixed, and both are brought into contact with each other and are joined by rotating fractional heat to form an integrated structure type sputtering target. In this way, even in the case sputtering is executed at high output, and the target 1 is made thin, warpage caused by the water pressure of cooling water is not generated on the target 1.

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